# Project Briefing - 3

**Group 4**

**System: Lawson (Supply chain/materials management)**

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**Project manager:** Ashwini Patki and Lee Farabaugh

## Accomplishments/ Progress to date:

Gathering information of Materials management systems from various articles, Lawson’s website and searching for various materials management systems. Looking for articles on how systems like Lawson support various healthcare organizations. We have discovered that Lawson has a number of software solutions. We are planning to focus on the supply chain solution, because that is what UAB focuses on in a partnership with Cardinal Health.

We recently completed an on-site visit with Dennis Sanchez and Tish Stewart to learn more about how UAB uses Lawson for Just In Time (JIT) materials management.

**About Lawson:**  
 “With Lawson, you get enterprise resource planning (ERP) software solutions that focus on your industry to provide you the competitive advantage and flexibility you expect in best-practice business process automation.” (<http://www.lawson.com/wcw.nsf/pub/applications_index>) Lawson offers variety of solutions to manage businesses depending on the size and requirement of the business.

Some of the major advantages of Lawson systems to manage businesses are as follows:

* Improve business process automation
* Improve overall workflow
* Promote business effectiveness and efficiency
* Flexibility of operations
* Manage security and user access
* Enable easy integration with existing services and emerging technologies

Lawson Business Process Management assists in administrative and operational system applications. It mainly supports IBM products. Lawson assures excellent performance and lower total cost of ownership (TCO). The system can be customized to individual needs of the business. Lawson system provides two different options to manage businesses:

A: Lawson M3 Business Process Management: This particular tool focuses on manufacturing and distribution related functions.

B: Lawson S3 Business Process Management: This particular tool focuses on service sector applications.

**Healthcare Supply Chain Information:**

Hospitals want to optimize their supply chains for a variety of reasons:

* stocking pharmaceuticals and supplies tie up a lot of capital
* labor costs to maintain materials supplies are significant
* availability and timely delivery is important

supplies need to be tracked for billing

* patient safety depends on right medication to right person at right time

Aspects of supply chain management

* pharmacy
* OR
* materials

Technologies currently in use:

* bar code scanning
* automatic dispensing machines (ADMs) that can be monitored remotely, with a picture taken every night and a PO created from that picture
* Picksys systems that monitor who accessed the contents of a supply cabinet
* GS1 System – a standard of global and unique identification of products and locations as well as continuous, automatic updates of standardized product information across all supply chain partners. It involves applying data standards to patients, processes, and products to eliminate errors, cases of unavailability, and improve service level quality and efficiency.
* RFID tags and readers to locate and track supplies in real time

Supply chain is part of a larger Enterprise Resource Management program, which includes accounting, supply chain, and human resources. As such, Lawson is an ERP vendor.

**Benefits of Lawson Supply Chain Management suite:**

* reduced process and supply costs through centralized purchasing
* lower inventory costs
* reducing steps in the procurement process
* improving decision making with metrics

**Case Study: Phoenix House**  
In the case study of the Phoenix House, a substance abuse treatment center for adults and adolescents, the facility used Lawson’s Materials Management and Financial solution software to improve the efficient and reliability of their materials management processes. Lawson was able to help Phoenix House:

* Create online requisitions
* Electronically route requisition approval
* Track activity from requisition to purchase order or warehouse demand
* Provide three-way match among purchase order, receipt, and invoice
* Generate inventory replenishment reports to notify warehouses to provide “just-in-time” inventory

The implementation of these changes in the processes allowed for employees of Phoenix House to do the above functions in less time and with a significant decrease in paperwork. The Lawson financial solution software has also been vital to improving the financial reporting of the Phoenix House. Since Phoenix House is a non-profit organization they must abide by much more complex financial reporting requirements than for-profit organizations. Lawson was able to do this by:

* Allowing accounts to generate and write their own reports, thus saving time and eliminating miscommunication between accounts and MIS.
* Making information more accessible. A user can be in the general ledger and use the software to easily access information in Accounts Payable in order to look at invoices and payment dates

## Issues encountered and proposed resolutions:

We have found the Lawson site to be largely a marketing vehicle without a lot of concrete information. However, the site visit filled in a lot of gaps in our knowledge. We have captured some additional questions for Dennis and Tish that we plan to email them in the next day or two.

## Contribution(s) of each group member:

We have all read the articles each group member has found on Lawson. Our articles are all posted on our team wiki, which is available here: <http://hi-602lawson.wikispaces.com/Articles+and+Documents>

Each member participated in the literature review and the on-site visit. Each member also contributed to answering the background questions. We are now working on the outline and slides for the presentation.

## Questions for which you cannot/have not find an answer

* 1. What kind of system architecture does Lawson use?
  2. Is Lawson the leader in this space?
  3. How interrelated are the various ERP products that Lawson sells?
  4. How do GS1 standards apply to the EDI component of the Lawson system?

So far we have encountered various advantages of Lawson products and have found many articles and documents to read about Lawson supply chain management applications.

## Any risks to your group project deliverable

## General Comments/Connections you’ve made between this course and either HI 601, HI 640 or HI 600

We can relate this project to previous courses in this program from various angles such as data maintenance, integration, data collection, business process redesign, user interface, cost and benefits of new systems and more. We see a lot of overlap between this system and the business process redesign topics we covered in HI-640, such as Lean, Six Sigma, etc. We are also seeing that a Lawson implementation is larger than the software itself, and involves some culture change, standardization of practices and coding, and workflow changes to accommodate the system. It’s not unlike CPOE in this way.

## Background questions and answers

1. **Describe the origin and progression of the technology. Eric**

Previous UAB landscape: huge warehouse, stocked with supplies. Buy all the materials in bulk and manage the inventory. When someone ordered a supply, it came from the warehouse, which requires locating the supply, picking, and delivering. System wasn’t efficient, took up a lot of space, required a lot of capital, labor intensive, required management of the real inventory. Things could expire as they sat in inventory. Stocked approximately 4 months supply.

Decided to move more into Just In Time. Just in Time eliminates the need for storage.

UAB had an electronic system called ESI that preceded Lawson, and lasted 20 years.

Lawson provides a number of benefits:

* requisition self service – allows all nurses and unit secretaries to place orders
* flexibility – can order 24/7
* orders are fulfilled in 24 hours or less
* EDI with vendors
* Better integration with the Oracle systems that already exist at UAB such as accounts payable
* Allowed UAB to reduce materials management staff from 116 to 54
* Allowed UAB to maintain a 3-4 days supply of materials rather than 3-4 months, freeing capital

1. **What does the technology do? Eric**

Manages inventory and par levels for materials including disposable and durable equipment supplies, crash carts, pharmacy, forms, and office supplies. A par is the maximum allowed to be on hand at any time. Lawson manages existing inventory and places orders when supply numbers fall below a minimum threshold. A handheld counting system is used each night to count inventory levels. These scanner forms match the supplies in a particular area as well as the configuration of the supplies to maximize efficiency in counting and ordering.

Reports give the supply staff information on levels so that they can be adjusted if necessary. Existing and custom reports provide information about the supply data including cost, utilization, and other metrics.

Orders for supplies can be done by any approved person (all nurses and unit secretaries as well as others). Users can order by unique identifier but don’t have to disclose patient identity. Ordering can be done from Lawson item number, premade templates, existing lists, or in a catalog “shopping” paradigm.

Cardinal Health fulfills 95% of the orders. Another supplier is a minority vendor called AllMed that fulfills a small percentage. Some suppliers won’t got through a distributor such as Cardinal, and those make up the remaining orders.

1. **End users: Tom**

2000 users, including Support Services Department (SSD) employees, which includes Lawson system administers, supply clerks who manage paper packing slips for materials from FedEx and UPS and perform “mail room” type duties, workers who scan packages from Cardinal. Other users are nurses and unit secretaries in HVC, anesthesia, CV perfusion the OR, and Labs.

No special degree is required. Nurses do 45 minutes of training. System administrators also don’t need a specialized degree and sometimes attend special trainings such as the Lawson User Group conference, classes or academies, and specific Lawson labs.

1. **What organizations drive the data sets that are captured? Lee**

The Joint Commission’s Emergency Management Standards may affect materials management – need to find out. If disaster is anticipated, SSD can order additional supplies based on past orders. Also need to find out about cleanliness regulations and OSHA.

In terms of system data, SSD defines item master and packaging tables in the system. They also manage a variety of item numbers – from manufacturers, vendors, and within the university. Unspec codes are codes that allow them to share information across universities – need to find out more about this.

GSO has more to do with EDI specs – find out more about this.

1. **What electronic data feeds into the upstream system and what data/information is fed to downstream systems? Lee**

Data feeds into upstream EDI with vendors. Orders go in and they become requisitions, which then become purchase orders, which then go through EDI system for vendor fulfillment. There is a tier of approval levels for supplies based on their price. Every item that is purchased has a vendor contract associated with it – there is a data stream between Lawson and the vendor management system. There’s also a data stream between Lawson and Accounts Payable. This, and other internal data streams are interfaces to Oracle systems.

1. **What manual data entry (if any) is fed into the system? Ashwini**

Manual data entry – for every product, an item master and packaging table must be created. The item master includes item codes, description, pricing, etc. The packaging table includes information for the item in its “each” form as well as the box or case in which it might be packaged, such as 16 items to a case. Description is a tricky field because the clinicians, manufacturer, and supply management staff may all call an item a different thing.

1. **What is the diffusion (adoption) rate of the system in US hospitals? Ashwini**

need more info

1. **Are any national patient safety goals tied to the use of this particular technology? Tom**

Supply chain standards are currently being debated in the industry.

1. **Identify the top three to five vendors of the system. Eric**
2. **Compare each vendor. Eric**
3. **Additional Information:**

RFID – potential, UAB planning to add RFID for faster uploads of counts from handhelds. This is going to be implemented over the next few months.